

Work Order ID 57891

Monday, April 19, 2010 3:31:22 PM



Page 1

Item ID: D350-636-012

Accept



Setup Start



Revision ID:

Item Name: Skidtube RH

Stop



Start Date: 4/19/2010 Start Qty: 1.00



Cust Item ID:

Required Date: 4/26/2010 Req'd Qty: 1.00



Customer:

Reference:

Approvals:

Process Plan: CL

Date: 10/4/20 Tooling:

Date:

Run Start



QC:

Date: SPC (Y/N):

Date:

Stop



Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

D2750

Rev F

100

0.00



DOCUMENT CONTROL

DC

Memo

0.00

Document Control

Photocopy blue file and type labels per PPP D350-636-012 CHG 005

CL 10/5/13 ①

Substos

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run HoursDraw
NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

110

0.00



Skidtubes

Skidtubes

Memo

0.00

Skidtubes

1- Mark cut line on aft end of D2600-3-Bent using Jig DT 8150. Cut to length as per Dwg D2750. Deburr end

2-Drill pilot holes as per Dwg D2750 sheet 5 (D2750-2 details).Drill using drill Jig DT8150 & DT8863 .

3- Mark fwd end for cutting using Drill Jig DT 8150 & DT8863 and cut as per dwg D2750.

4-Drill pilot holes for blade fitting bolts using DT8983. Open to 0.500"

5- locate DT8329 off of blade fitting bolt holes and drill pilot holes blade fitting.

6-Open up holes for Detail K to 0.375" (4 holes per side) blade fitting location holes to 0.500" (total of 4 holes per side) as per dwg D2750. Open holes for ground handling and detail L to 0.500" (8 holes per side)

7-Drill pilot holes for wearplates as per Dwg D2750 using DT8108. Open to 0.297".

8-Open up holes of Detail J to 0.297" (total of 2 holes per side)

9-Weld D2744 Cap as per Dwg D2750 and QSI 004.Fill grooves in bend left from bending as per QSI 004

A/R ☐ ☐ Aluminum Rod☐ M112207

BE 10/04/22

10-Grind welds flush as per Dwg D2750

DP 10-4-21

M 10/4/21

M 10/4/21

DP 10-4-22

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Date:

Tooling:

Date:

Run Start

QC:

Date:

SPC (Y/N):

Date:

Stop

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Work Center IDOperation
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Run HoursDraw
NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

11- scribe batch #.

H 10/4/21

120

QC10- Inspect visual per QSI004- ground welds

0.00



QC

Memo

0.00

Quality Control

130

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

140

Chemical Conversion Coat per QSI005 4.1

0.00



HandFinish

Memo

0.00

Hand Finishing

DP 10-4-22

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Date:

SPC (Y/N):

Date:

Run Start

Stop

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

150

QC3- Inspect Part Finish

0.00



QC

Memo

0.00

Quality Control

18 2 MB 10-04-22

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Stop

Sequence ID/
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Run HoursDraw
NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

160

0.00



Skidtubes

Skidtubes

Memo

0.00

1-Open up holes of Detail L and ground handling to 0.625" (total of 8 holes per side) as per dwg D2750.

2-Open up holes of Detail K to 0.750" (total of 4 holes per side) as per dwg D2750.

3-Open float holes to .500" (4 per Side)

4-Chamfer holes of Detail K, L, ground handling and float holes per dwg D2750 (welding instructions on sheet 9)

5-Deburr and blow out all chips from inside of tube

6-Prepare tube for welding, remove alodine as required.

7-Bond web D2739 in place as per QSI 015

A/R ☐☐☐ Sikaflex-291batch: 112427 ☐☐☐

exp. date: 10-8-20

8- Weld spacers D3490-1, D3490-3 and D2743 as per dwg D2750 & QSI004 (welding instructions on sheet 9)

A/R ☐☐☐ Aluminum Rod

batch: M113207

BE 10/04/27

9-Grind welds flush as per Dwg D2750

10-Spot face ground handling holes section (total of 4 places per side) as per dwg D2750

u 10/14/27

10-4-22

AUM 10-4-26

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Customer:

Reference:

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Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

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NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

11- At section AJ-AJ drill out x-bolt spacer to 0.404"

12-Debur holes

M 12/4/27

170



QC

Quality Control

QC10- Inspect visual per QSI004- ground welds

0.00

Memo

0.00

8/10/12/28

180



QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

Memo

0.00

8/10/12/28

④

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Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop



Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

190

Pressure Wash per QSI005 4.3

0.00



HandFinish

Memo

0.00

Hand Finishing

Re-alodine tube as per QSI 005 section 4.1.2.1 do not acid etch.

①

10-4-28

200

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00



Powdercoat

Memo

0.00

Powder Coating

START TIME: 1:30pm
OVEN TEMPERATURE: 320°F
FINISH TIME: 2:00pm

⇒ 10/04/28

1 ①

210

QC3- Inspect Part Finish

0.00



QC

Memo

0.00

Quality Control

Inspect for foreign object per QSI 024

= 7m. 10/04/28 ①X

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QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start

Stop

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NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

220

0.00



HandFinish

HandFinishing

Memo

0.00

Hand Finishing

Install inserts as per dwg D2750

=> m-h 10/04/29

(1X)

230

0.00



HandFinish

HandFinishing

Memo

0.00

Hand Finishing

1-Inspect for Foreign Objects

2-Spray inside of tube with "LPS-3"
batch: _____ N/A3-Install blade fitting D3488-042, wearshoes and ground handling hardware as
per dwg D2750

SIKA FLEX 241

BATCH: _____

EXP DATE: _____

M112 429
10/08

4-assemble o-ring to plug as per dwg D3492 and apply o-ring lube

A/R 55-o-ring lube batch: _____

M114189

5-Coat all exposed fasteners with "LPS Procyon"

batch: _____

M104251

M-h 10/04/29

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Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run HoursDraw
NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

240

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

8 10/04/30

②

250

Pick Kit

0.00



Packaging

Memo

0.00

Packaging

10-5-3 sf

260

QC4- 100% Inspect kits for completeness

0.00



QC

Memo

0.00

Quality Control

8 10/05/03

②

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Run HoursDraw
NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

270

0.00



Packaging

0.00

Packaging

Memo

Rev H

105-4 SF

Packaging

Package as per PPP D350-636-012

L72

280

0.00



QC21- Final Inspection - Work Order Release

0.00

QC

Memo

10/05/04 SF

Quality Control

PS 10-5-04

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Picklist Print

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Page 1

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Parent Item: D350-636-012

Parent Item Name: Skidtube RH

Start Date: 4/19/2010

Required Date: 4/26/2010

Comments: IPP Rev: I 02.09.25 Rearranged procedure steps KJ
IPP Rev: J 06-03-29 As per Rev D EC
IPP Rev: K 06-07.13 As per dsi9343 EC
IPP Rev: L 07-07-28 Added SS Wearplates(Rev E) JLM Verified By: EC

Start Qty: 1.00

Required Qty: 1.00

ALS4-1032-225 Purchased No 220 Each 7,689.000 38.0000



Insert

Warehouse Loc Qty Loc Code

Location

Main Warehouse

PK011

7689

110768 ✓

7689

AN3C5A Purchased No 230 Each 883.0000 34.0000



Bolt

Warehouse Loc Qty Loc Code

Location

Main Warehouse

ST350

500

114330 ✓

500

Main Warehouse

ST351

383

113121

53

114056

179

114108

51

114181

100

38 m-h 10/04/29

34 m-h 10/04/29

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 IPP Rev: L 07-07-28 Added SS Wearplates(Rev E) JLM Verified By: EC

Start Qty: 1.00

Required Qty: 1.00

AN3C6A

Purchased

No

230

Each

679.0000 4.0000



BOLT

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST351

679

111982 ✓

679

230

Each

53.0000 4.0000

AN6C44A

Purchased

No



BOLT

Warehouse

Loc Qty

Loc Code

Location

OFFSHORE

FG

2

103964

2

Main Warehouse

ST344

51

111605 ✓

1

111649 ✓

50

10/04/29

4X m-h

4X m-h
10/04/29

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Shop Packet Print

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Start Qty: 1.00

Required Qty: 1.00

AN8C35A Purchased No 230 Each 19.0000 1.0000

 BOLT


Warehouse Loc Qty Loc Code

Location

Main Warehouse


FP 19

110847 ✓ 19

AN960C10L Purchased No 230 Each 0.0000 38.0000

 washer

MA S1149C0332R

M114341

AN960C816L Purchased No 230 Each 146.0000 1.0000

 WASHER

Warehouse Loc Qty Loc Code

Location

Main Warehouse

ST348 146

110584 100

111424 ✓ 46

1-X m-h 10/04/29
 38X m-h 10/04/29

1X m-h 10/04/29

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Start Qty: 1.00

Required Qty: 1.00

D2745 Manufactured No 230 Each 150.0000 8.0000



Bushing

Warehouse Loc Qty Loc Code

Location

Main Warehouse

ST023

150

52311 ✓

150

D3488-042 Manufactured No 230 Each 27.0000 1.0000



Blade Fitting Assembly, RH

Warehouse Loc Qty Loc Code

Location

Main Warehouse

FP

7

52666 ✓

7

Main Warehouse

FP008

20

53918

20

8X m-h
10/04/29

1X m-h
10/04/29

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Work Order ID: 57891



Parent Item: D350-636-012



Parent Item Name: Skidtube RH

Start Date: 4/19/2010

Required Date: 4/26/2010

Comments: IPP Rev: I 02.09.25 Rearranged procedure steps KJ
 IPP Rev: J 06-03-29 As per Rev D EC
 IPP Rev: K 06-07.13 As per dsi9343 EC
 IPP Rev: L 07-07-28 Added SS Wearplates(Rev E) JLM Verified By: EC

Start Qty: 1.00

Required Qty: 1.00

D3492-041

Manufactured No

230

Each

82.0000

8.0000



Plug Assembly

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

FP

42

55446

42

Main Warehouse

FP031

40

57517 ✓

40

D3492-043

Manufactured No

230

Each

82.0000

8.0000



Plug Assembly

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

FP

42

54682

42

Main Warehouse

FP013

40

57519 ✓

40

10/04/29
8x m-k

10/04/29
8x m-k

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Work Order ID: 57891



Parent Item: D350-636-012



Parent Item Name: Skidtube RH

Start Date: 4/19/2010

Required Date: 4/26/2010

Comments: IPP Rev: I 02.09.25 Rearranged procedure steps KJ
 IPP Rev: J 06-03-29 As per Rev D EC
 IPP Rev: K 06-07.13 As per dsi9343 EC
 IPP Rev: L 07-07-28 Added SS Wearplates(Rev E) JLM Verified By: EC

Start Qty: 1.00

Required Qty: 1.00

D3535-25

Manufactured No

230

Each

16.0000

1.0000



Wearshoe

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

FP

16

56065

4

56839

12

Manufactured No

230

Each

10.0000

1.0000

D3536-25



Gasket

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

FP10

10

54479

10

1X m-i 10/04/29

1X m-i 10/04/29

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Work Order ID: 57891



Parent Item: D350-636-012



Parent Item Name: Skidtube RH

Start Date: 4/19/2010

Required Date: 4/26/2010

Comments: IPP Rev: I ☐ 02.09.25 ☐ Rearranged procedure steps ☐ KJ ☐
IPP Rev: J 06-03-29 As per Rev D EC
IPP Rev: K 06-07.13 As per dsi9343 EC
IPP Rev: L 07-07-28 Added SS Wearplates (Rev E) JLM Verified By: EC

Start Qty: 1.00

Required Qty: 1.00

D3537-1

Manufactured No

230

Each

63.0000

3.0000



Wearpad

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

FP

9

55465

9

Main Warehouse

FP17

54

57510 ✓

54

D3631-1

Manufactured No

230

Each

302.0000

8.0000



Washer

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST076

302

52693 ✓

302

10/04/29
3x m-l

8x m-l
10/04/29

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

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Work Order ID: 57891



Parent Item: D350-636-012



Parent Item Name: Skidtube RH

Start Date: 4/19/2010

Required Date: 4/26/2010

Comments: IPP Rev: I 02.09.25 Rearranged procedure steps KJ
 IPP Rev: J 06-03-29 As per Rev D EC
 IPP Rev: K 06-07.13 As per dsi9343 EC
 IPP Rev: L 07-07-28 Added SS Wearplates(Rev E) JLM Verified By: EC

Start Qty: 1.00

Required Qty: 1.00

D3672-1 Manufactured No 230 Each 1,589.000 4.0000



Phenolic Washer

Warehouse Loc Qty Loc Code

Location

Main Warehouse

ST077 1589

47628 ✓ 89

51674 500

52505 1000

D3791-1 Manufactured No 230 Each 18.0000 1.0000



Wearplate

Warehouse Loc Qty Loc Code

Location

Main Warehouse

FP 7

55457 7

Main Warehouse

FP17 ✓ 11

56299 11

m-h
4x
10/04/2010

m-h
1x
10/04/2010

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Work Order ID: 57891



Parent Item: D350-636-012



Parent Item Name: Skidtube RH

Start Date: 4/19/2010

Required Date: 4/26/2010

Comments: IPP Rev: I 02.09.25 Rearranged procedure steps KJ
 IPP Rev: J 06-03-29 As per Rev D EC
 IPP Rev: K 06-07.13 As per dsi9343 EC
 IPP Rev: L 07-07-28 Added SS Wearplates(Rev E) JLM Verified By: EC

Start Qty: 1.00

Required Qty: 1.00

D3793-1

Manufactured No

230

Each

14.0000

1.0000



Wearshoe

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

FP18

14

51597

2

56300

12

Manufactured No

230

Each

10.0000

1.0000

D3793-3



Wearshoe

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

FP19

10

55458

10

1x m-h 10/04/2010

1x m-h 10/04/2010

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

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Work Order ID: 57891



Parent Item: D350-636-012



Parent Item Name: Skidtube RH

Start Date: 4/19/2010

Required Date: 4/26/2010

Comments: IPP Rev: ☐ 02.09.25 ☐ Rearranged procedure steps ☐ KJ ☐
IPP Rev: J 06-03-29 As per Rev D EC
IPP Rev: K 06-07.13 As per dsi9343 EC
IPP Rev: L 07-07-28 Added SS Wearplates(Rev E) JLM Verified By: EC

Start Qty: 1.00

Required Qty: 1.00

D3794-1

Manufactured No

230

Each

19.0000

1.0000



Gasket

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

FP

7

55459 ✓

7

Main Warehouse

FP014

12

57537

12

D3794-3

Manufactured No

230

Each

27.0000

1.0000



Gasket

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

FP

4

51907

4

Main Warehouse

FP18

23

56066 ✓

23

1x m-h w/04/29

1x m-h w/04/29

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

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Work Order ID: 57891

Parent Item: D350-636-012

Parent Item Name: Skidtube RH

Comments: IPP Rev: 02.09.25 Rearranged procedure steps KJ
 IPP Rev: J 06-03-29 As per Rev D EC
 IPP Rev: K 06-07.13 As per dsi9343 EC
 IPP Rev: L 07-07-28 Added SS Wearplates (Rev E) JLM Verified By: EC

Start Date: 4/19/2010

Required Date: 4/26/2010

Start Qty: 1.00

Required Qty: 1.00

MS21043-6 Purchased No 230 Each 878.0000 4.0000
 NUT

Warehouse Loc Qty Loc Code
Location

Main Warehouse
 ST301 878
 112314 ✓ 878

MS21083C8 Purchased No 230 Each 50.0000 1.0000
 NUT

Warehouse Loc Qty Loc Code
Location

Main Warehouse
 ST303 50
 113845 ✓ 50

NAS1611-010 Purchased No 230 Each 330.0000 8.0000
 O-RING

Warehouse Loc Qty Loc Code
Location

Main Warehouse
 FP 330
 110715 ✓ 100
 110915 ✓ 230

4x m-h 10/04/29

1x m-h 10/04/29

8x m-h 10/04/29

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

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Work Order ID: 57891



Parent Item: D350-636-012



Parent Item Name: Skidtube RH

Start Date: 4/19/2010

Required Date: 4/26/2010

Comments: IPP Rev: I 02.09.25 Rearranged procedure steps KJ
 IPP Rev: J 06-03-29 As per Rev D EC
 IPP Rev: K 06-07.13 As per dsi9343 EC
 IPP Rev: L 07-07-28 Added SS Wearplates (Rev E) JLM Verified By: EC

Start Qty: 1.00

Required Qty: 1.00

NAS1611-013



Purchased No 230 Each 41.0000 8.0000

O-RING

Warehouse Loc Qty Loc Code
Location

Main Warehouse

FP 41

113743 41

AN8C21A



Purchased No 250 Each 99.0000 2.0000

BOLT

Warehouse Loc Qty Loc Code
Location

Main Warehouse

ST345 99

111605 49

113558 50

AN960C816L



Purchased No 250 Each 146.0000 2.0000

WASHER

Warehouse Loc Qty Loc Code
Location

Main Warehouse

ST348 146

110584 100

111424 46

X

8X m-l 6/10/29

10-5-3

sf

2

10-5-3

ol

2

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

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Work Order ID: 57891



Parent Item: D350-636-012



Parent Item Name: Skidtube RH

Start Date: 4/19/2010

Required Date: 4/26/2010

Comments: IPP Rev: I 02.09.25 Rearranged procedure steps KJ
 IPP Rev: J 06-03-29 As per Rev D EC
 IPP Rev: K 06-07.13 As per dsi9343 EC
 IPP Rev: L 07-07-28 Added SS Wearplates(Rev E) JLM Verified By: EC

Start Qty: 1.00

Required Qty: 1.00

D2741 Manufactured No 250 Each 43.0000 1.0000



Blade, 350 Skidtube

10-5-35

Warehouse Loc Qty Loc Code
Location

Main Warehouse

ST466 43

51931 11

55905 32

D3493-1 Manufactured No 250 Each 19.0000 2.0000



Washer

10-5-35

Warehouse Loc Qty Loc Code
Location

Main Warehouse

ST224 19

47710 19

D3532-1 Manufactured No 250 Each 51.0000 2.0000



Spacer

10-5-35

Warehouse Loc Qty Loc Code
Location

Main Warehouse

ST068 51

52321 51

2

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Monday, April 19, 2010 3:31:22 PM

Work Order ID: 57891



Parent Item: D350-636-012



Parent Item Name: Skidtube RH

Start Date: 4/19/2010

Required Date: 4/26/2010

Comments: IPP Rev: ☐ 02.09.25 ☐ Rearranged procedure steps ☐ KJ ☐

Start Qty: 1.00

Required Qty: 1.00

IPP Rev: J 06-03-29 As per Rev D EC

IPP Rev: K 06-07-13 As per dsi9343 EC

IPP Rev: L 07-07-28 Added SS Wearplates (Rev E) JLM Verified By: EC

D3672-13

Purchased No

250

Each

920.0000 2.0000



Phenolic Washer



10-5-35

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST077

920

54363

920

MS21083C8

Purchased No

250

Each

50.0000 2.0000



NUT



2
10-5-35

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST303

50

113845

50

D2600-3-BENT

Manufactured No

110

Each

3.0000 1.0000



Extrusion Bent



8

B57538

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

LG

3

55462

3

①

DP

10-4-21

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Monday, April 19, 2010 3:31:22 PM

Work Order ID: 57891



Parent Item: D350-636-012



Parent Item Name: Skidtube RH


Start Date: 4/19/2010

Required Date: 4/26/2010

Comments: IPP Rev: I 02.09.25 Rearranged procedure steps KJ
 IPP Rev: J 06-03-29 As per Rev D EC
 IPP Rev: K 06-07.13 As per dsi9343 EC
 IPP Rev: L 07-07-28 Added SS Wearplates(Rev E) JLM Verified By: EC

Start Qty: 1.00

Required Qty: 1.00

D2744: Manufactured No 110 Each 40.0000 1.0000


Cap

Warehouse Loc Qty Loc Code

Location

Main Warehouse

LG

40


47488

21

51922

19

1 4/10/4/21

D2739 Manufactured No 160 Each 7.0000 1.0000


350 I Beam

Warehouse Loc Qty Loc Code

Location

Main Warehouse


LG

6

55986

56060

[Handwritten signature] 10-4-26

D2743 Manufactured No 160 Each 130.0000 8.0000


Crossbolt Spacer

Warehouse Loc Qty Loc Code

Location

Main Warehouse

LG

130

50281

50

52310

80

[Handwritten signature] 8 4/10/4/27

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Work Order ID: 57891

Parent Item: D350-636-012

Parent Item Name: Skidtube RH

Comments: IPP Rev: I 02.09.25 Rearranged procedure steps KJ
 IPP Rev: J 06-03-29 As per Rev D EC
 IPP Rev: K 06-07.13 As per dsi9343 EC
 IPP Rev: L 07-07-28 Added SS Wearplates(Rev E) JLM Verified By: EC

Start Date: 4/19/2010

Required Date: 4/26/2010

Start Qty: 1.00

Required Qty: 1.00

D3490-3

Manufactured No

160

Each

40.0000

4.0000



Cross Bolt Spacer

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

LG

55010

40

40

160

Each

73.0000

4.0000

D3490-1

Manufactured No



Cross Bolt Spacer

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

LG

51932

57723

73

8

65

Handwritten notes:
 B 57918 (K1) BE 10/04/27
 3 BE 10/04/27
 4 BE 10/04/27

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

QTY -041	QTY -042	QTY -043	QTY -044	PART NUMBER	DESCRIPTION
X				D2750-041	350 SKIDTUBE ASSEMBLY, LH
	X			D2750-042	350 SKIDTUBE ASSEMBLY, RH
		X		D2750-043	350 SKIDTUBE ASSEMBLY, LH
			X	D2750-044	350 SKIDTUBE ASSEMBLY, RH
1	1	1	1	D2739	WEB
8	8	8	8	D2743	SPACER
1	1	1	1	D2744	CAP
8	8	8	8	D2745	BUSHING
1				D2750-1	SKIDTUBE WELDMENT, LH
	1			D2750-2	SKIDTUBE WELDMENT, RH
		1		D2750-3	SKIDTUBE WELDMENT, LH
			1	D2750-4	SKIDTUBE WELDMENT, RH
1		1		D3488-041	BLADE FITTING, LH
	1		1	D3488-042	BLADE FITTING, RH
4	4	4	4	D3490-1	SPACER
4	4			D3490-3	SPACER
		4	4	D3490-5	SPACER
8	8	8	8	D3492-041	PLUG ASSEMBLY
8	8			D3492-043	PLUG ASSEMBLY
		8	8	D3492-045	PLUG ASSEMBLY
1	1	1	1	D3535-25	WEARSHOE
1	1	1	1	D3536-25	GASKET
3	3	3	3	D3537-1	WEARPAD
8	8	8	8	D3631-1	WASHER
1	1	1	1	D3791-1	WEARPLATE
1	1	1	1	D3793-1	WEARSHOE
1	1	1	1	D3793-3	WEARSHOE
1	1	1	1	D3794-1	GASKET
1	1	1	1	D3794-3	GASKET
38	38	38	38	ALS4-1032-225	INSERT (OR ALS7-1032-225, AKS4-1032-225, AELS-1032-225)
34	34	34	34	AN3C5A	BOLT
4	4	4	4	AN3C6A	BOLT
4	4	4	4	AN6C44A	BOLT
1	1	1	1	AN8C35A	BOLT
38	38	38	38	AN960C10L	WASHER
1	1	1	1	AN960C816L	WASHER
4	4	4	4	MS21043-6	NUT
1	1	1	1	MS21083C8	NUT
4	4	4	4	NAS1515H3L	WASHER

GENERAL NOTES:

- MATERIAL: MAKE D2750-1/-2/-3/-4 FROM D2600-3 EXTRUSION (INITIAL LENGTH = 120.0).
- FINISH:
ACID ETCH, ALONDE ASSEMBLY PER DART QSI 005 4.1 PRIOR TO INSTALLING D2739 WEB.
POWDER COAT WHITE (REF. 4.3.5.1) PER DART QSI 005 4.3
BLACK ANTI-SKID PAINT AS INDICATED TO 1.0 ABOVE SKIDTUBE CENTER-LINE PER DART 005 4.4 (OPTIONAL).
- TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- UNITS: INCHES UNLESS OTHERWISE NOTED
- BREAK SHARP EDGES: N/A
- IDENTIFICATION: N/A
- WEIGHT: D2750-041/-042/-043/-044 = 26.5 LBS
- WELD PER DART QSI 004
- INSTALL ALS4-1032-225 INSERTS AFTER FINISH AS INDICATED. DRILL 'F' SIZE HOLES ($\phi 0.297$) FOR WEARSHOE INSERTS
- FINAL CONFIGURATION SHOULD HAVE THE FOLLOWING MINIMUM MECHANICAL PROPERTIES:
MINIMUM YIELD TENSILE STRENGTH = 35 KSI
MINIMUM ULTIMATE TENSILE STRENGTH = 38 KSI
- SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH AND AFTER INSTALLATION OF INSERTS.
COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF
POWDER COATING WITH MEK DEGREASER.
- SPACER AND PLUG INSTALLED SAME AS SECTION AJ-AJ EXCEPT HORIZONTAL
- SPACER AND PLUG INSTALLED SAME AS SECTION AP-AP EXCEPT HORIZONTAL

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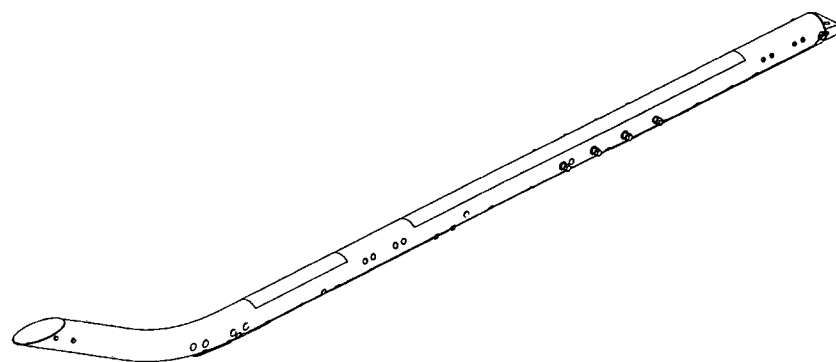
CZ10/4/20

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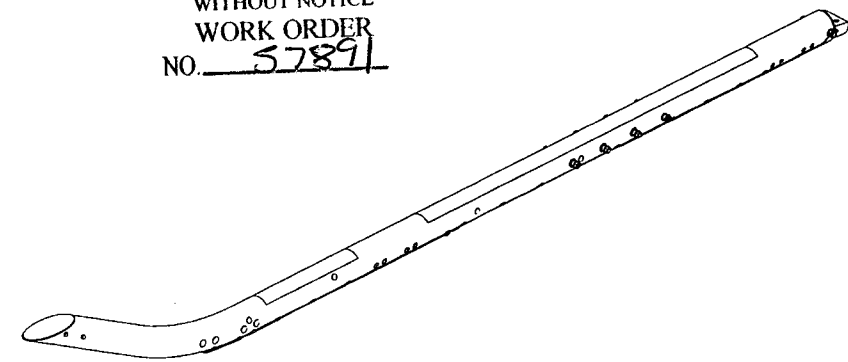
F	INCORPORATE DSI 9413; QTY (3) D3537-1 WAS QTY (5) (ZN C8-1); D3791-1/3 REPLACES D3535-13/35 (ZN C8-1); D3794-1/3 REPLACES D3535-13/35 (ZN B8-1); ADD D3791-1 (ZN C8-1); WEARSHOE HOLES UNDER FWD/AFT SADDLE REMOVED (8 PL); WEARSHOE HARDWARE QTY UPDATED (ZN B8-1); D3488-041/-042 HARDWARE UPDATED (ZN C1-8, 9, 10, 11); ADD NOTE 12 AND 13 (ZN A6-1); REASON: REF. NCR 08-043	PH	08.07.16
E	CHANGE TO STAINLESS STEEL WEARPLATES; ADD RUBBER GASKETS; CHANGE INSERTS; ADD D3631-1; REMOVE QTY (38) NAS1515H3L; REMOVE QTY (10) NAS1515H3L; REMOVE D2741; QTY (2) AN960C816; REMOVE QTY (2) MS21083C8	CB	07.05.17
D	ADD HOLES AND SPACERS FOR APICAL FLOATS; INCORPORATE DEO 9133/9157	PH	06.01.05
C	ADD D2750-3/D2750-4; INCORPORATE D2738 AND D2740	CP	98.11.18
B	CHANGE MS24694-S293 TO AN8-16A	CP	98.09.01
A	NEW ISSUE	DS	98.04.16
REV.	DESCRIPTION	BY	DATE
DESIGN	PC		
DRAWN	REH		
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	08.07.16		

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D2750-041 350 SKIDTUBE ASSEMBLY, LH

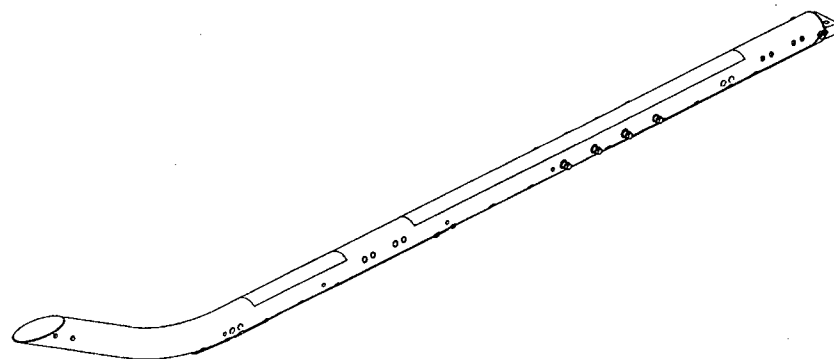


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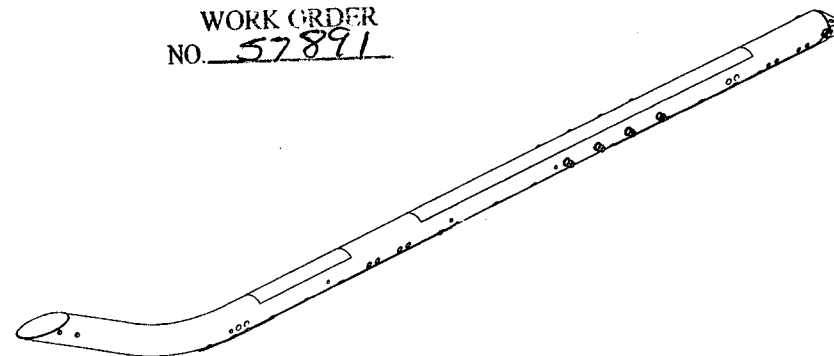
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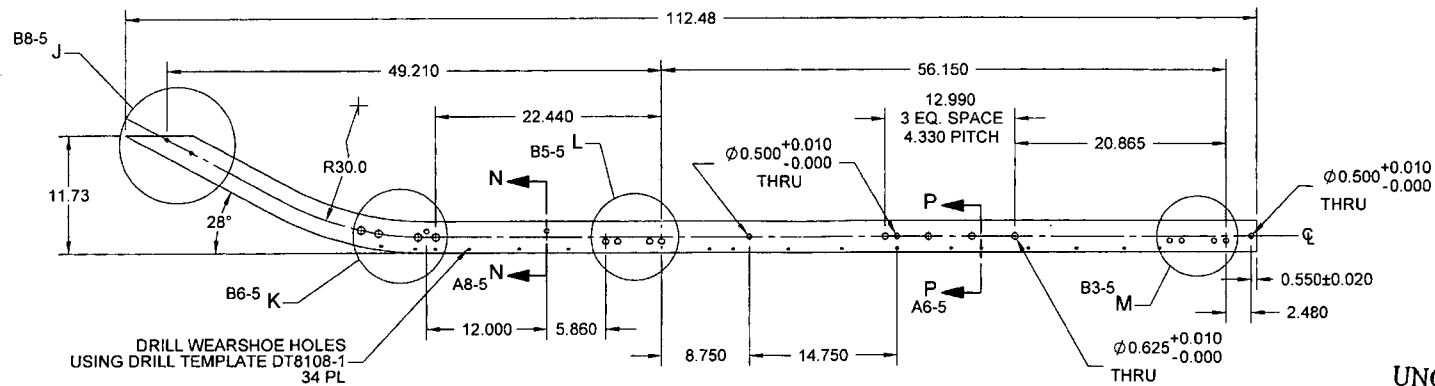
D2750-043 350 SKIDTUBE ASSEMBLY, LH



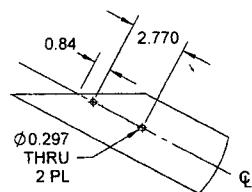
D2750-044 350 SKIDTUBE ASSEMBLY, RH

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 68-09-22/117

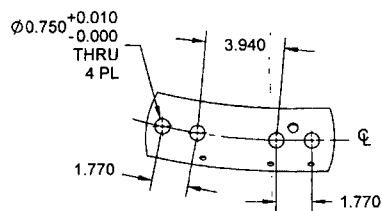
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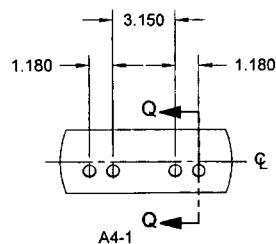
D2750-2 RH SKIDTUBE



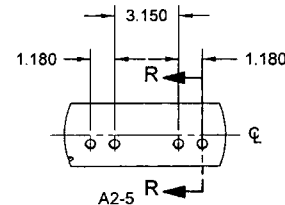
DETAIL J
SCALE 2X



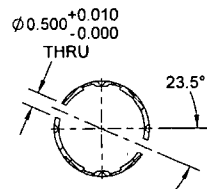
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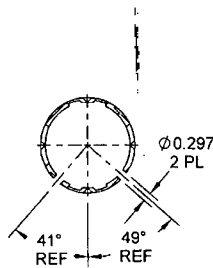
DETAIL L
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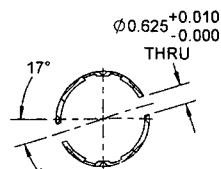
DETAIL M
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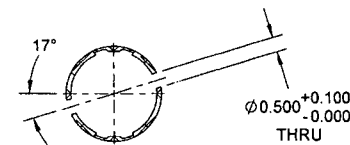
SECTION N-N
SCALE 3X, 2 PL



SECTION P-P
SCALE 3X, 17 PL



SECTION Q-Q
SCALE 3X, 4 PL

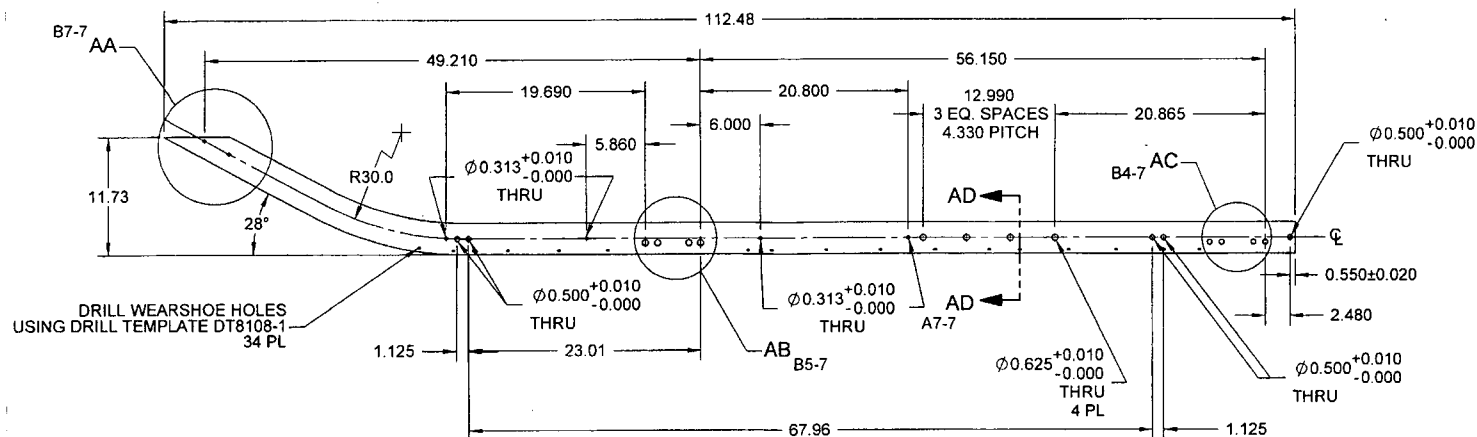


SECTION R-R
SCALE 3X, 4 PL

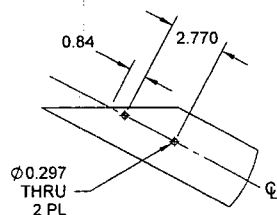
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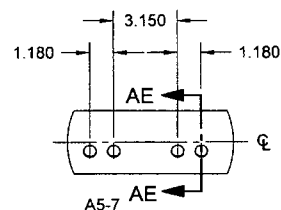
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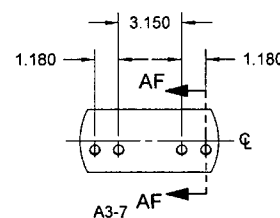
D2750-4 RH SKIDTUBE



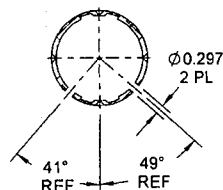
DETAIL AA
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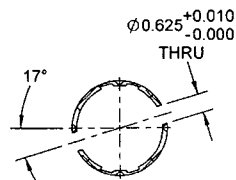
DETAIL AB
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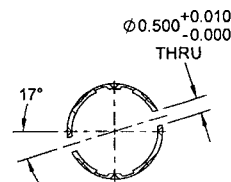
DETAIL AC
SCALE 2X



SECTION AD-AD
SCALE 3X, 17 PL



SECTION AE-AE
SCALE 3X, 4 PL



SECTION AF-AF
SCALE 3X, 4 PL

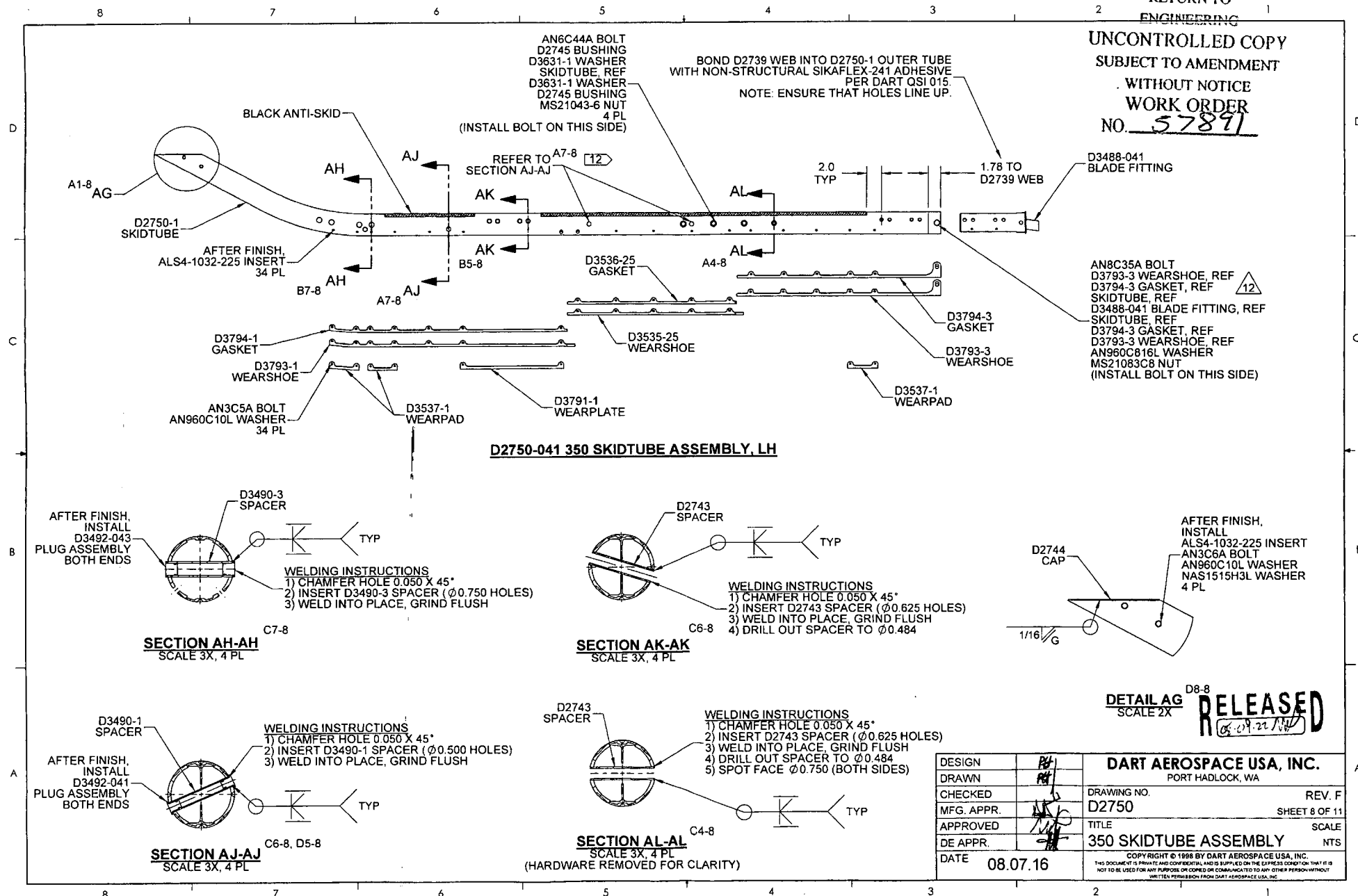
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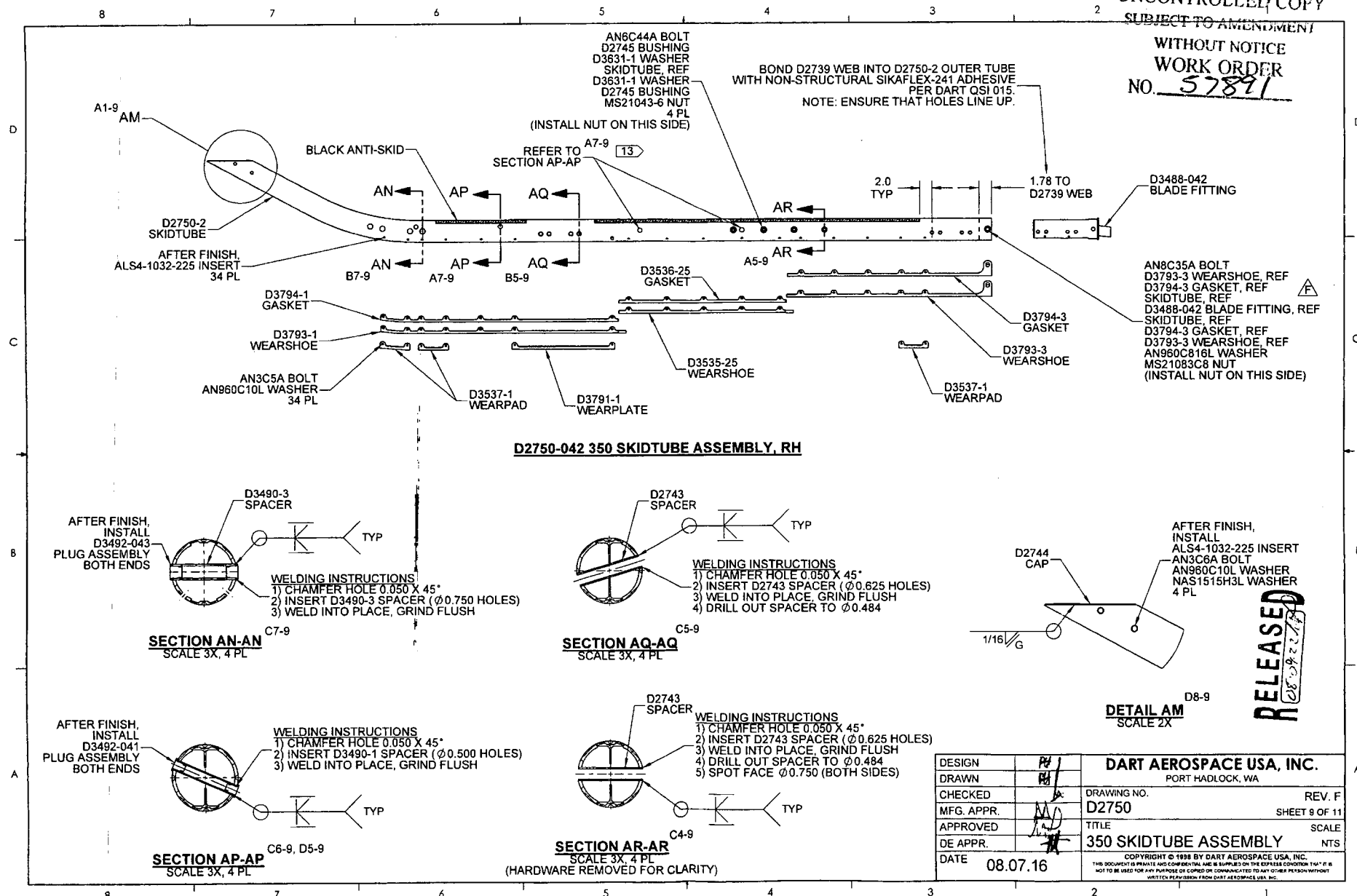


DETAIL AG D8-8
SCALE 2X
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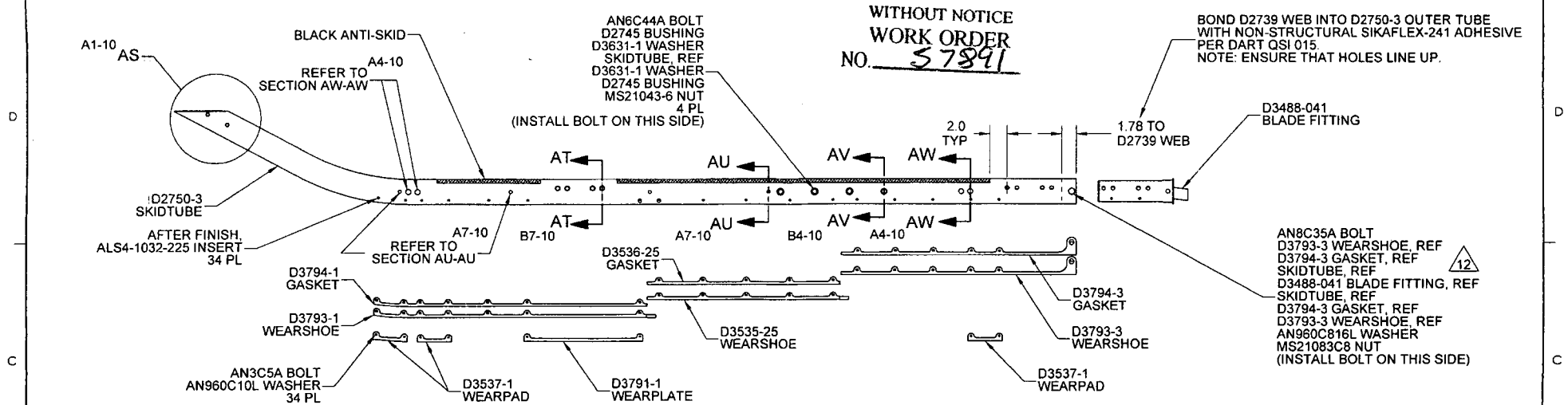


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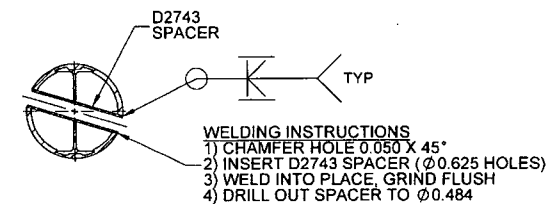
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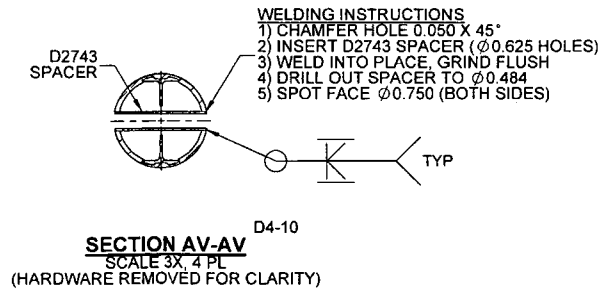
BOND D2739 WEB INTO D2750-3 OUTER TUBE
WITH NON-STRUCTURAL SIKAFLEX-241 ADHESIVE
PER DART QSI 015.
NOTE: ENSURE THAT HOLES LINE UP.



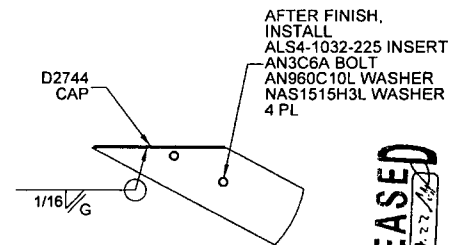
D2750-043 350 SKIDTUBE ASSEMBLY, LH



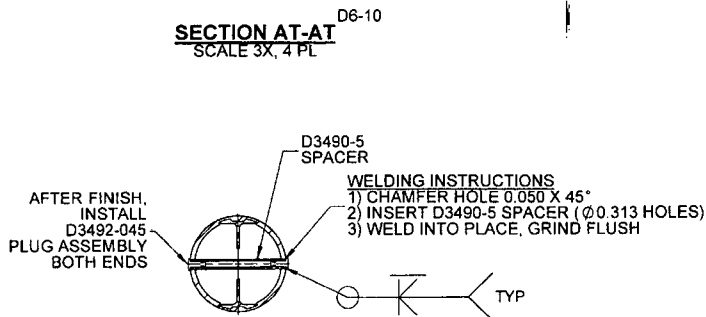
SECTION AT-AT
SCALE 3X, 4 PL



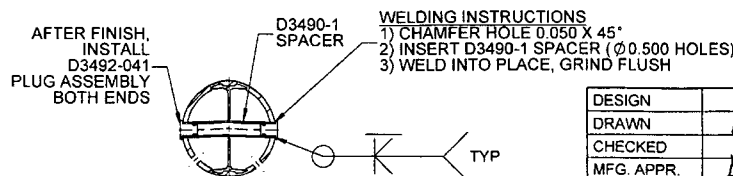
SECTION AV-AV
SCALE 3X, 4 PL









DETAIL AS
SCALE 2X



SECTION AU-AU
SCALE 3X, 4 PL



SECTION AW-AW
SCALE 3X, 4 PL

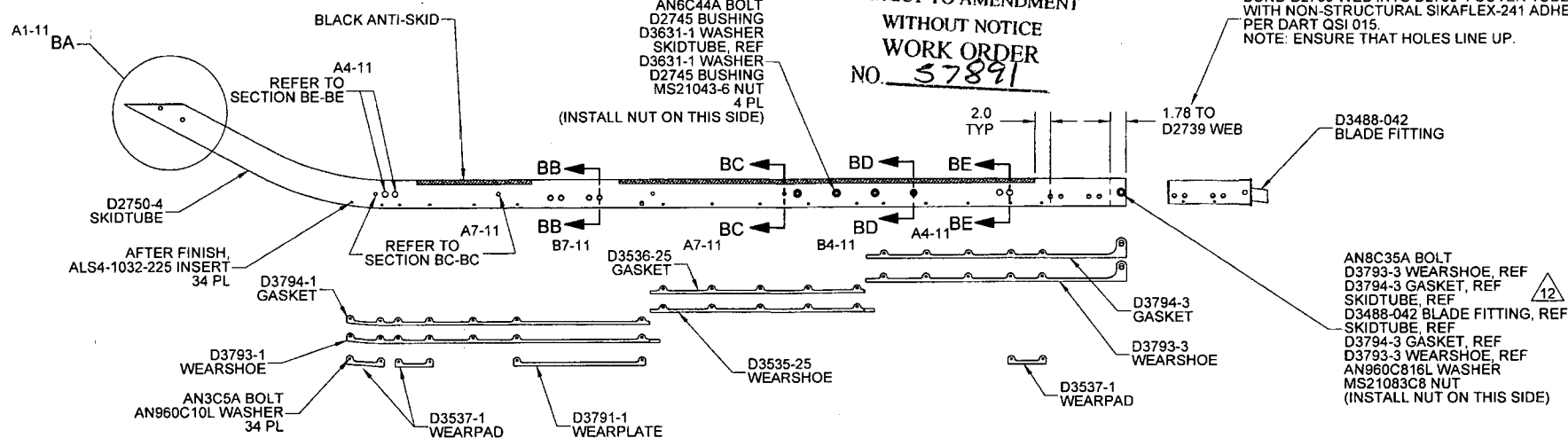
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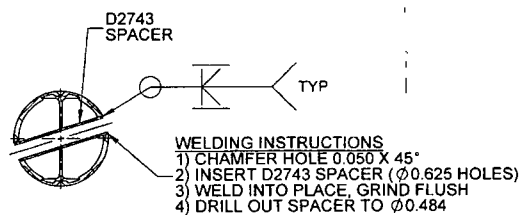
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BOND D2739 WEB INTO D2750-4 OUTER TUBE
WITH NON-STRUCTURAL SIKAFLEX-241 ADHESIVE
PER DART QSI 015.
NOTE: ENSURE THAT HOLES LINE UP.

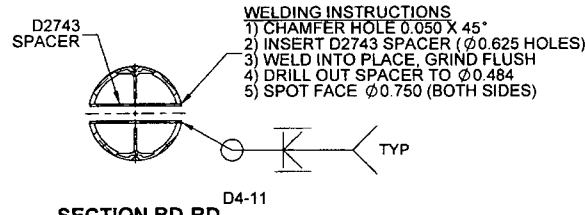


D2750-044 350 SKIDTUBE ASSEMBLY, RH

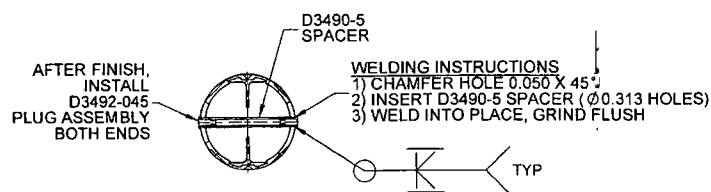
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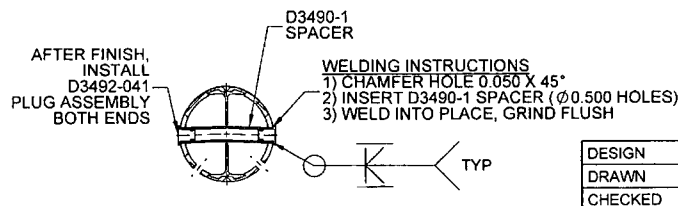
SECTION BB-BB
SCALE 3X, 4 PL



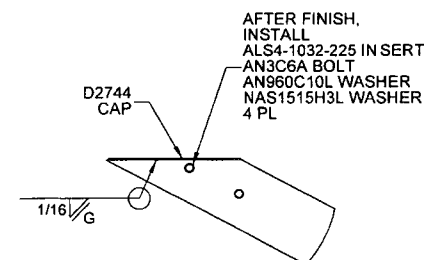
SECTION BD-BD
SCALE 3X, 4 PL
(HARDWARE REMOVED FOR CLARITY)



SECTION BC-BC
SCALE 3X, 4 PL



SECTION BE-BE
SCALE 3X, 4 PL



DETAIL BA
SCALE 2X

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NO. 229

AWS D17.1.2001
QUALIFICATION TEST RECORD

Name: Barclay Elliott
Job number: 58103
Part number: D350 6x6 02
Description: 350 skid tube
Welding Process: Tig[☒] Mig[]
Base material: Aluminium
Current: AC[☒] DC[]

TEST REQUIREMENTS AND RESULTS

Visual: pass[☒] fail[]
Penetration: pass[☒] fail[]

UNACCEPTABLE

Cracks: pass[☒] fail[]
Undercut: pass[☒] fail[]
Pin holes: pass[☒] fail[]
Overlap (cold lap): pass[☒] fail[]
Porosity (surface): pass[☒] fail[]
Coloration: pass[☒] fail[]

Qualifier Pat. D. A. Date of Test Coupon 10-04-27

Welder Barclay Elliott Date of Test Coupon 10-04-27

The above named individual is qualified in accordance with AWS D17.1.2001 to weld